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Supreme Court, U.S.
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In The

SUPREME COURT OF THE UNITED STATES

FESTO CORPORATION

Petitioner,

v.

SHOKETSU KINZOKU KOGYO
KABUSHIKI CO., LTD., a/k/a
SMC Corp. and SMC Pneumatics, Inc.,

Respondents.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

BRIEF OF THE AMERICAN BAR ASSOCIATION AS AMICUS CURIAE IN SUPPORT OF PETITIONER

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35 pp

QUESTION PRESENTED

Whether a finding of prosecution history estoppel completely bars application of the doctrine of equivalents.

TABLE OF CONTENTS

Page

QUESTION PRESENTED i

TABLE OF AUTHORITIES iv

STATEMENT OF INTEREST 1

SUMMARY OF ARGUMENT 2

ARGUMENT 3

I. BACKGROUND OF THE DOCTRINE OF EQUIVALENTS AND PROSECUTION HISTORY ESTOPPEL 3

II. THE "COMPLETE BAR" RULE CONFLICTS WITH THIS COURT'S DECISIONS 6

III. THE "COMPLETE BAR" RULE IS CONTRARY TO PUBLIC POLICY 10

A. THE "COMPLETE BAR" RULE ALL BUT ABOLISHES THE DOCTRINE OF EQUIVALENTS FOR MORE THAN 1.2 MILLION ISSUED PATENTS 10

B. THE "COMPLETE BAR" RULE WILL SUBSTANTIALLY AND UNDULY BURDEN PATENT PROSECUTION .. 16

1. The Decision Below Fails to Take into Account the Realities of Claim Drafting and Patent Prosecution 16

2. The Federal Circuit's New Rule Will Increase The Cost And Complexity of Patent Prosecution 19

C. THE FEDERAL CIRCUIT HAS UPSET THE BALANCE BETWEEN ENCOURAGING INNOVATION AND PROVIDING NOTICE TO THE PUBLIC OF THE SCOPE OF AN ISSUED PATENT 20

CONCLUSION 25

TABLE OF AUTHORITIES

Page(s)

Cases

Altech Controls Corp. v. EIL Instruments, Inc.,
No. 00-1216, 2001 U.S. App. LEXIS 8089
(Fed. Cir. May 2, 2001) 15

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315 U.S. 126 (1942) 11

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339 U.S. 605 (1950) 3, 14, 21

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STATEMENT OF INTEREST

The American Bar Association ("ABA"), with more than 400,000 members, is the leading national membership organization of the legal profession. Its members come from each of the fifty states, the District of Columbia, and the U.S. territories. Membership is voluntary and includes attorneys in private practice, government service, corporate law departments and public interest organizations, as well as legislators, law professors, law students, and non-lawyer associates in related fields.[1] The ABA's Section of Intellectual Property Law is the largest organization of intellectual property lawyers in the world, with more than 20,000 members. The Intellectual Property Law Section has contributed significantly to the development of the systems for the protection of intellectual property rights in the United States.

The ABA has consistently supported a strong patent system, recognizing the important incentives that it provides for technological progress. It has recognized that an important part of the patent system is a well-defined and consistently applied doctrine of equivalents.

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[1] This brief is filed with the consent of both Petitioners and Respondent. Letters of consent have been filed with the Clerk. Pursuant to Rule 37.6, the ABA states that this brief has not been authored in whole or in part by counsel for a party and that no person or entity, other than *amicus*, its members, or its counsel, has made a monetary contribution to the preparation or submission of this brief. Neither this brief nor the decision to file it should be interpreted to reflect the views of any judicial member of the American Bar Association. No inference should be drawn that any member of the Judicial Division Council has participated in the adoption of or endorsement of the positions in this brief. This brief was not circulated to any member of the Judicial Division Council prior to filing.

In February, 2001, the ABA House of Delegates adopted the following resolution as ABA policy:

> RESOLVED, that the American Bar Association opposes in principle that an amendment to a patent claim shall necessarily operate as a bar as to all equivalents with respect to the amended language of the claim.

This brief is submitted in accordance with this policy and to assist in securing implementation of the principle that it supports.

SUMMARY OF ARGUMENT

The ABA respectfully submits that the Federal Circuit, in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 576-77 (Fed. Cir. 2000), erred in its formulation of the so-called "complete bar" rule, precluding any reliance on the doctrine of equivalents with respect to a patent claim limitation that was the subject of a narrowing amendment made during prosecution for a reason relating to patentability. The "complete bar" rule is inconsistent with precedent of this Court. It also is contrary to sound public policy for at least the following reasons: First, the new rule all but abolishes the doctrine of equivalents for a large proportion of the more than 1.2 million unexpired patents, unfairly denying many patentees a scope of protection that they had every reason to expect and that they did not voluntarily relinquish to secure issuance of their patents. Second, the new rule places a nearly impossible burden on patent applicants and their counsel to draft and prosecute patent claims that achieve the broadest literal coverage to which they are entitled, while avoiding amendments that will result in forfeiture of all rights under the doctrine of equivalents. Third, the substantial erosion of

the patent right that will result from the new rule, coupled with the increased complexity and cost of patent application preparation and prosecution, will diminish the incentive that fuels innovation in this country. It will discourage use of the patent system and will encourage reliance on trade secret protection.

For these reasons, the ABA respectfully urges this Court to reject the "complete bar" rule in favor of a "flexible bar" rule.[2]

ARGUMENT

I.

BACKGROUND OF THE DOCTRINE OF EQUIVALENTS AND PROSECUTION HISTORY ESTOPPEL

The doctrine of equivalents has been an important part of the patent law of this country for more than one hundred years. Harold C. Wegner, *Equitable Equivalents: Weighing the Equities to Determine Patent Infringement in Biotechnology and Other Emerging Technologies*, 18 Rutgers Computer & Tech. L.J. 1, 7-8 (1992). This Court succinctly reiterated the rationale behind the doctrine in its 1950 decision in *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950):

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[2] The ABA takes no position on the issue of whether or not the Petitioner has met its burden of proving infringement of the patents in suit.

> [C]ourts have also recognized that to permit imitation of a patented invention which does not copy every literal detail would be to convert the protection of the patent grant into a hollow and useless thing. Such a limitation would leave room for -- indeed encourage -- the unscrupulous copyist to make unimportant and insubstantial changes and substitutions in the patent which, though adding nothing, would be enough to take the copied matter outside the claim, and hence outside the reach of law.

In applying the doctrine of equivalents, courts recognize the real-life difficulties of describing in words the precise boundaries of an invention or discovery. So the words are given leeway, and one who appropriates the invention, yet makes insubstantial changes to avoid the literal language of the patent claim, nevertheless is liable as an infringer. The constitutionally recognized incentive of the patent system is fortified--indeed, is made real rather than illusory--in no small part by the doctrine of equivalents. It is presumably for this reason that this Court recently declined a suggestion that it should abolish the doctrine altogether. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997).

It is fair to say, however, that the doctrine is subject to abuse. Once untethered from the literal claim language, patent holders are tempted to stretch their lawful right to exclude to unreasonable extremes. Competitors are forced to defend against expensive, protracted patent litigation based on theories of infringement that are not recognizable from the claim language or the patent specification. *Id.* at 28-29 ("We do, however, share the concern . . . that the doctrine of equivalents, as it has come to be applied since *Graver Tank*,

has taken on a life of its own, unbounded by the patent claims.").

To balance fairness to the patentee against certainty and reasonable public notice of the scope of the patent right, limits have been established on the application of the doctrine. These limits fall into three main categories. First, the scope of protection cannot be expanded so as to encompass subject matter that would have been unpatentable over the prior art. *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 683-85 (Fed. Cir. 1990), *cert. denied*, 498 U.S. 992 (1990). Second, if an element of the patent claim is omitted from the accused device or process and an equivalent element is not substituted for it, there can be no infringement under the doctrine of equivalents. *Warner-Jenkinson*, 520 U.S. at 31; *Pennwalt Corp. v. Durand-Wayland, Inc.*, 833 F.2d 931, 934 (Fed. Cir. 1987) (en banc), *cert. denied*, 485 U.S. 961, 1009 (1988). Third, the patentee may not recapture subject matter that was relinquished during patent prosecution to secure the grant of the patent. *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc.*, 170 F.3d 1373, 1376 (Fed. Cir. 1999).

The last limitation, known as "prosecution history estoppel," and its effect on the scope of protection available to a patentee are issues presented by this case. Frustrated by what it perceived as an "unworkable" and unpredictable "flexible" approach in determining the range of permissible equivalents following an estoppel-creating amendment of a claim limitation, the Federal Circuit radically altered the landscape for patent owners, patent applicants, and the public. In a split decision that one district court has recently

characterized as "jarring,"[3] the Federal Circuit announced its "complete bar" rule. This rule denies the patentee any protection under the doctrine of equivalents with respect to a claim limitation that was narrowed by amendment during prosecution for any reason related to a statutory requirement for patentability. Although the Federal Circuit found some authority for the "complete bar" rule in its prior cases, the court acknowledged that it overruled a long line of precedent that employed a "flexible" approach to determining the range of equivalents remaining after a finding of prosecution history estoppel. *Festo,* 234 F.3d at 574-75.

II.

THE "COMPLETE BAR" RULE CONFLICTS WITH THIS COURT'S DECISIONS

The Federal Circuit' s "complete bar" rule means that prosecution history estoppel precludes any range of equivalents for an amended claim element. *Festo*, 234 F.3d at 569 ("When a claim amendment creates prosecution history estoppel with regard to a claim element, there is no range of equivalents available for the amended claim element."). This rule forecloses further consideration of the prosecution record in any particular case where an amendment triggering prosecution history estoppel has occurred. *Id.* at 600 (Michel, J., concurring in part, dissenting in part).[4]

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[3] *Control Res., Inc. v. Delta Elecs.*, 133 F. Supp. 2d 121, 135 (D. Mass 2001).

[4] Thorough discussions of precedential decisions of this Court and of the Federal Circuit are set forth in the Federal Circuit's majority opinion and in Judge Michel's dissenting opinion, and will not be repeated here.

The Federal Circuit held that an estoppel is triggered "when an amendment has narrowed the scope of a claim for a reason *related to patentability*." *Id.* at 574. The net effect is that a narrowing amendment for any reason related to patentability -- whether substantial or insubstantial -- deprives the patentee of any protection under the doctrine of equivalents with respect to the amended claim element. It is difficult to reconcile these holdings with this Court's precedent.

The Federal Circuit's "complete bar" rule proceeds from the premise that this Court has never addressed the range of permissible equivalents that remains after an estoppel-creating amendment. *Id.* at 569. In *Warner-Jenkinson*, however, this Court left no room for the conclusion that all equivalents to an amended claim element are forfeited regardless of the reasons for an amendment. Instead, it ruled that the nature of the Patent and Trademark Office's objection and the rationale for the amendment were subject to a court's examination before determining the range of equivalents. *Warner-Jenkinson*, 520 U.S. at 33 and n. 7.

In *Warner-Jenkinson*, the Court referred to its own precedent and pointed out that, in each of its prior cases dealing with prosecution history estoppel, the prosecution record was examined and the reasoning behind an amendment was probed before applying prosecution history estoppel as a limitation on the doctrine of equivalents. *Id.* at 30-31. "What *is* permissible for a court to explore is the reason (right or wrong) for the objection and the manner in which the amendment addressed and avoided the objection." *Id.* at 33 n.7 (emphasis in original). Such inquiries would be useless acts under a "complete bar" rule.

Moreover, this Court placed the burden on the patentee to establish that the rationale for a limiting amendment to the claims during prosecution would not preclude infringement by equivalents to that element. *Id.* at 33 (The court then would decide "whether that reason is sufficient to *overcome prosecution history estoppel* as a bar to application of the doctrine of equivalents to the element added by that amendment.") (emphasis added). This evidentiary burden would be meaningless if the "complete bar" rule were applied, because, under that rule, whenever a claim amendment creates prosecution history estoppel, no scope of equivalents is available. The Federal Circuit's new rule circumvents this Court's approach to the scope of equivalents available after claim amendments.

The diminution of patent protection resulting from the "complete bar" rule is exacerbated by the Federal Circuit's relatively low threshold for determining when an amendment results in an estoppel. The court held that amendments made for any reason related to patentability give rise to estoppels. *Festo*, 234 F.3d at 576. In *Warner-Jenkinson*, this Court held that failure to establish a reason for a claim amendment leads to a presumption that the amendment was made for a "substantial" reason related to patentability. *Warner-Jenkinson*, 520 U.S. at 33-34. This holding suggests that estoppels arise only from amendments made for "substantial" reasons related to patentability. The Federal Circuit rule omits any requirement of substantiality.[5] The "complete bar" rule,

[5] For example, in the case at bar, certain amendments were made for purposes of clarification (responding to an examiner's inquiry as to whether the claimed device is a true motor or a magnetic clutch) and for purposes of eliminating improper multiple claim dependencies (resulting from the foreign origin of the application). *See Festo*, 234 F.3d at 583. Both amendments were related to statutory requirements of patentability (35 U.S.C. § 112). The court did not, however, address whether the reasons for the amendments were so substantial that they should create estoppels precluding all application of the doctrine of equivalents to the amended limitation.

together with the court's low standard for determining when an amendment gives rise to an estoppel, creates a regime that virtually eliminates the doctrine of equivalents. It is, therefore, inconsistent with this Court's admonition that "to change so substantially the rules of the game ... could very well subvert the various balances the PTO sought to strike when issuing the numerous patents which have not yet expired and which would be affected by our decision." *Warner-Jenkinson*, 520 U.S. at 32 n.6. The Federal Circuit's ruling vitiates this Court's careful balancing of the competing needs of meaningful patent protection and adequate public notice in fashioning limits on the doctrine of equivalents. *See id.* at 34 (The presumption places "reasonable limits" on the doctrine of equivalents and "further insulates the doctrine from any feared conflict with the Patent Act.").

It was this very kind of balancing that was reflected in the Federal Circuit's own decisions prior to the ruling below. *See Festo*, 234 F.3d at 609-10, 611 (Michel, J., concurring in part, dissenting in part). In more than fifty decisions spanning nearly two decades, with few exceptions, the Federal Circuit utilized a flexible, case-by-case approach in determining the extent to which prosecution history estoppel acted as a legal limitation on the doctrine of equivalents. *See, e.g., Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1363 (Fed. Cir. 1983) (prosecution history estoppel may limit application of the doctrine of equivalents "within a spectrum ranging from

great to small to zero," depending on the reasons for the positions taken during prosecution). Because of the Federal Circuit's exclusive jurisdiction over appeals in patent cases from the Patent and Trademark Office and the district courts, its long-standing "flexible" approach has guided both the procurement and enforcement of the vast majority of unexpired patents.

III.

THE "COMPLETE BAR" RULE IS CONTRARY TO PUBLIC POLICY

A. THE "COMPLETE BAR" RULE ALL BUT ABOLISHES THE DOCTRINE OF EQUIVALENTS FOR MORE THAN 1.2 MILLION ISSUED PATENTS

More than 1.2 million patents have been issued and remain in force in the United States. These patents were prosecuted based on reasonable and settled expectations as to the effect of narrowing amendments on the scope of equivalents for a claim element. *See Festo*, 234 F.3d at 618-19 (Michel, J., concurring in part, dissenting in part). During the process of negotiating with the Patent and Trademark Office to procure the allowance of claims, many patentees accepted limiting amendments without intending to surrender the entire coverage afforded by the doctrine of equivalents. *See* William James, *Ensuring Broad Claim Coverage After* Festo, The Computer & Internet Lawyer, May 2001, at 13, 13-14.

Under then-existing and well-established law, a range of equivalents remained available to an applicant who narrowed a claim by amendment, limited only by the scope of

the prior art and a determination of what was relinquished based on the reason for the amendment. *See Festo*, 234 F.3d at 612-15 (Michel, J., concurring in part, dissenting in part) (collecting Federal Circuit cases applying the "flexible bar" rule). The inventor's reliance on the doctrine of equivalents formed part of the consideration for the inventor's disclosure of the invention to the public; hence, the retroactive effect of the "complete bar" rule upsets the basic assumptions underlying the bargain between the public and the inventor. *Warner-Jenkinson*, 520 U.S. at 32 and n.6; *Festo*, 234 F.3d at 618-619 (Michel, J., concurring in part, dissenting in part).

A rationale for the application of prosecution history estoppel is that a patentee should be precluded from recapturing, through the doctrine of equivalents, subject matter that was relinquished during prosecution to obtain the patent. *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 136 (1942). A patentee might, for example, amend an aspect of a claim element to avoid prior art. The patentee may not recapture the surrendered subject matter. *Pharmacia*, 170 F.3d at 1376. However, under the pre-*Festo* "flexible bar" rule, a copyist could not, despite such an amendment, avoid infringement by making minor changes to a different aspect of the amended element, because the patentee had not secured allowance of the patent by relinquishing the coverage of the subject matter modified by the copyist. *See, e.g., Hughes Aircraft Co. v. United States*, 140 F.3d 1470, 1476 (Fed. Cir. 1998). Following the Federal Circuit's ruling, that protection is eliminated, because prosecution history estoppel precludes any range of equivalents for the amended claim element. *See, e.g., Control Res.*, 133 F. Supp. 2d at 136-37.[6]

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[6] *See also Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 249 F.3d 1314, 1326-27 (Fed. Cir. 2001), which involved a

The effect of the "complete bar" rule on existing patents is illustrated by the Federal Circuit's post-*Festo* decision in *Insituform Techs., Inc. v. Cat Contracting, Inc.*, No. 00-1005, 2001 U.S. App. LEXIS 4570 (Fed. Cir. March 26, 2001). The lengthy history of the litigation, summarized in the court's opinion (*id.*, at *4 - *8), involved the Federal Circuit's twice finding that prosecution history estoppel did not preclude the application of the doctrine of equivalents with respect to one of the processes used by the accused infringers ("Process 1"). *See Insituform Techs., Inc. v. Cat Contracting, Inc.*, 99 F.3d 1098, 1109 (Fed. Cir. 1996) ("Insituform I"), *cert. denied*, 520 U.S. 1198 (1997), and *Insituform Techs., Inc. v. Cat Contracting, Inc.*, 161 F.3d 688, 692 (Fed. Cir. 1998) ("Insituform II"), *cert. denied*, 526 U.S. 1018 (1999). In *Insituform II*, the Federal Circuit concluded that this Court's decision in *Warner-Jenkinson* did not affect the earlier decision that prosecution history estoppel did not preclude application of the doctrine of equivalents to Process

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claim to a system for controlling the orientation of a communications satellite. The Federal Circuit, applying *Festo*, held that no range of equivalents is available with respect to a claim limitation requiring a "means for rotating [a gyroscopic wheel] in accordance with a predetermined rate schedule which varies sinusoidally over the orbit at the orbital frequency of the satellite." The language "at the orbital frequency of the satellite" was added by amendment to distinguish over prior art that disclosed sinusoidal variation over a period of minutes, rather than over the orbital frequency of 24 hours. The patentee argued that this amendment had nothing to do with the issue of equivalence, because the accused infringer's satellite employed substantially the 24-hour sinusoidal variation of the claim, not the short periods of variation described in the prior art. Nonetheless, because the limitation was amended to overcome the prior art, it was accorded no range of equivalents.

1. 161 F.3d at 692. The court reasoned that although the pertinent claim limitation had been narrowed during prosecution to distinguish over prior art, the patentee did explain the reason for the amendment, and a scope of protection encompassing Process 1 was not surrendered.

After the decision in the case here under review, the Federal Circuit addressed *Insituform* a third time, on appeal from the district court's final judgment entered after a bifurcated trial on damages. The Federal Circuit held that its ruling in the present case, revisiting the issue of prosecution history estoppel, compelled the conclusion that prosecution history estoppel barred any range of equivalents. 2001 U.S. App. LEXIS 4570, at *22-*24. The judgment of infringement was, therefore, reversed.

As a consequence of patentees' reliance on then-existing and well-settled law, the vast majority of issued patents have been significantly diminished in value by the "complete bar" rule. The value of a patent is tied directly to the scope of its claims. Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 Colum. L. Rev., 839, 839 (May 1990). If the decision below were permitted to stand, it is likely that in many cases an inventor would be found to have sacrificed a key claim element of the invention by making an amendment, opening up to competitors the area just outside the literal scope of this element. *See* John A. Wasleff, et al., Festo *Opens the Door*, Nat'l. L.J., Feb. 5, 2001, at C1, C21. The retroactive application of the "complete bar" rule would provide a safe harbor to competitors and copyists -- they can "read the prosecution history to identify amendments made for patentability reasons ... copy every other limitation exactly, but substitute any known interchangeable structure, matters or step for any limitation that has been amended." *Festo*, 234

F.3d at 616 (Michel, J., concurring in part, dissenting in part). The substance of an invention would be subordinated to its form, and the patent holder would be deprived of the benefit of the inventive efforts--a benefit that the doctrine of equivalents was designed to protect. *See Graver Tank*, 339 U.S. at 607; Kevin A. Wolff, et al., *The Unspoken Loss in Shareholder Value: Patent Rights Take a Hit*, Mealey's Litig. Rep. Intell. Prop., Apr. 2, 2001, at 41, 48 ("... *Festo* places greater emphasis on the public notice function of the claims to put would-be infringers on notice, but in the process trump[s] the patentee's equitable interests.").

The value of the patent is also tied directly to the ability of its owner to enforce it against infringers and copyists. Under the decision below, the existence of a minor amendment to a claim element in the prosecution record will lead judges to dismiss what otherwise would have been meritorious patent infringement cases. *See* Marc S. Hanish & Adrienne Yeung, *Patent Practitioners Beware: The Federal Circuit Releases a Manifesto*, 9 Nevada Lawyer 18, 21 (Mar. 2001). Furthermore, many pending lawsuits were initiated by parties and their counsel on the basis of the same reasonable and well-settled expectations regarding the relationship between prosecution history estoppel and the doctrine of equivalents. Many of these suits will now be barred by the decision below.[7]

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[7] The impact of the "complete bar" rule on litigation involving issued patents is highlighted by the significant number of post-*Festo* Federal Circuit decisions in which the "complete bar" rule was invoked to eliminate any scope of equivalents for an amended claim limitation. As of this writing, the "complete bar" rule has been applied in the following post-*Festo* decisions of the Federal Circuit:

Pioneer Magnetics, Inc. v. Micro Linear Corp., 238 F.3d 1341, 1346-47 (Fed. Cir. 2001), *petition for cert. filed*, 69 U.S.L.W. 3756 (U.S. May 23, 2001) (No. 00-1765);

Litton Sys., Inc. v. Honeywell Inc., 238 F.3d 1376, 1380 (Fed. Cir. 2001), *petition for cert. filed*, 69 U.S.L.W. 3702 (U.S. April 23, 2001) (No. 00-1617);

Insituform Techs., 2001 U.S. App. LEXIS 4570, at *22-*23;

Lockheed Martin, 249 F.3d at 1326-27;

Altech Controls Corp. v. EIL Instruments, Inc., No. 00-1216, 2001 U.S. App. LEXIS 8089, at *12 (Fed. Cir. May 2, 2001);

Mycogen Plant Science, Inc. v. Monsanto Co., 252 F.3d 1306, 1319-1320 (Fed. Cir. 2001);

Semitool, Inc. v. Novellus Sys., Inc., No. 00-1375, 2001 U.S. App. LEXIS 11986, at *22 (Fed. Cir. June 8, 2001);

Creo Products Inc. v. Dainippon Screen Mfg. Co., Ltd., No. 00-1536, 2001 U.S. App. LEXIS 9302, at *4-*5 (Fed. Cir. May 14, 2001), *petition for cert. filed*, 70 U.S.L.W. 3130 (U.S. August 21, 2001) (No. 01-269).

The diminution of value of existing patents will also have a disproportionate effect on smaller companies and individual inventors who rely on only a small number of patents to cover the fruits of their research and development. These patents may serve as their only source of leverage against much larger competitors with superior resources. Peter J. Ayers, *Federal Circuit's* Festo *is Unfriendly Toward Patent Rights*, Texas Lawyer, Jan. 8, 2001, at 53, 54.

B. THE "COMPLETE BAR" RULE WILL SUBSTANTIALLY AND UNDULY BURDEN PATENT PROSECUTION

1. The Decision Below Fails to Take into Account the Realities of Claim Drafting and Patent Prosecution

The patent examination process ideally results in allowance of claims whose literal scope is fully commensurate with the applicant's inventive contribution and the descriptive and enabling support provided by the specification. The Federal Circuit's "complete bar" rule has dramatically altered the process used to achieve that result and places unrealistic burdens on applicants and their patent counsel. Applicants are now required to present claims that are precisely drafted as broadly as the disclosure supports (35 U.S.C. § 112) and the prior art permits (35 U.S.C. §§ 102 and 103), yet not so broad as to provoke a rejection that may, during prosecution, require an amendment that will foreclose any subsequent reliance on the doctrine of equivalents. The alternative is to present narrow claims, thus relinquishing literal coverage, in hopes of avoiding an estoppel. Applicants and their counsel will find this dilemma difficult to resolve. Paul F. Fehlner, *A New 'Biohazard' for Patent Applicants: Broad Biotechnology Patent Claims*, The Metropolitan Corporate Counsel, Mar. 2001, at 4, 4.

The expectation that applicants and their counsel can determine with precision the broadest claim language that will not provoke a rejection is unrealistic. Bruce J. Rose, et al., *The Value of Quality Patent Preparation and Prosecution Increases under* Festo, 8 Elec. Banking L. and Com. Rep. 26,

28 (Feb. 2001). Patent prosecution involves human interactions that are not predictable. Language that one examiner might find clear and unobjectionable may be found by another examiner to be defective. Judge Linn succinctly described the impact of the new rule (of the decision below) on claim drafting: "The new regime also places greater emphasis on literary skill than on an inventor's ingenuity." *Festo*, 234 F.3d at 620 (Linn, J., concurring in part, dissenting in part).

Patent applications, particularly in highly competitive emerging technologies, are often filed as early as possible. Knowledge about the invention and the prior art changes over the course of prosecution. Even the most thorough pre-filing search typically does not unearth every piece of prior art, and the patent attorney cannot confidently anticipate the prior art on which the examiner will focus during prosecution. Gerry Gressel, *Claim Drafting and Claim Amendment to Reduce the* Festo *Effect*, Intell. Prop. Today, Apr. 2001, at 24, 24.

Before the Federal Circuit decision in this case, applicants could advance patent prosecution and allowance by offering amendments to overcome examiners' objections. They now have a strong incentive to resist such changes and to traverse and appeal rejections that they might otherwise readily accept. The Federal Circuit's new rule "creates a disincentive for the present system of negotiation between applicant and PTO examiner in arriving at agreed upon claim language, with probably some as of yet unforeseen consequences." S. Jay Plager, *Challenges for Intellectual Property Law in the Twenty-First Century: Indeterminacy and Other Problems*, 2001 U. Ill. L. Rev. 69, 74 (2001). The resulting increased burdens on both applicants and the Patent and Trademark Office are apparent.

Although it is true that assessing what the patentee has relinquished and what remains under the doctrine of equivalents after an amendment is neither easy nor precise, this task is not substantially different from many other disputes that courts must resolve. Indeed, determining the permissible scope of equivalents that remain after a narrowing amendment is not more difficult, and may be less difficult, than determining the range of equivalents to which an unamended claim is entitled. The amendment and accompanying dialogue between the applicant and the patent examiner are likely to provide some information that assists in ascertaining the appropriate range of equivalents. The problems identified by the Federal Circuit are not so much a result of the fact that a claim has been narrowed by amendment as they are of problems inherent in determining where the equivalency line should be drawn.

2. The Federal Circuit's New Rule Will Increase The Cost And Complexity of Patent Prosecution

The new rule announced by the Federal Circuit has spawned prosecution strategies that add to the burdens of the applicant and the Patent and Trademark Office. Time-consuming and expensive pre-filing searches are more important now to ensure that the claim drafter has reviewed as much of the prior art that the examiner may consider important during prosecution as possible. Of course, "there is no guarantee that the examiner will recognize the distinguishing features of even the most carefully crafted claim." Steven E. Koffs, *What's Left of the Doctrine of Equivalents?*, The Legal Intelligencer, Jan. 4, 2001, at 5, 7.

The applicant also may choose initially to draft and file numerous independent claims of varying scope, so that if the broader claims are rejected, the narrower claims may be allowed without the need for amendment. Hanish & Yeung, *supra,* 9 Nevada Lawyer at 21. If the examiner is not convinced by the applicant's arguments, the applicant will then have to spend additional time and resources to appeal the examiner's decision to the Board of Patent Appeals and Interferences.

The "complete bar" rule increases the costs of patent prosecution, a result that is not in the public interest. Plager, *supra*, 2001 U. Ill. L. Rev. at 73-74 (Federal Circuit should ask whether its decisions "achieve the goal sought with the least cost to other parts of the system?"). Commentators have suggested that other, less draconian solutions that take into account the limitations of the English language and the realities of patent preparation and prosecution are available and should be considered. William M. Atkinson, et al., *Was*

Festo *Really Necessary?*, 83 J. Pat. & Trademark Off. Soc'y 111, 141-42 (Feb. 2001) (demonstrating that alternatives to the "complete bar" rule provide public notice and certainty).

C. THE FEDERAL CIRCUIT HAS UPSET THE BALANCE BETWEEN ENCOURAGING INNOVATION AND PROVIDING NOTICE TO THE PUBLIC OF THE SCOPE OF AN ISSUED PATENT

The significantly greater contentiousness, expense and duration of patent prosecution and likelihood of increased free-riding on patented innovations by competitors and copyists under the Federal Circuit's new rule will undermine the substantial contribution of the patent system to economic growth in the United States. One of the primary functions of the patent system is to encourage innovation and investment in research and development to foster economic growth as well as technological advance. *Festo*, 234 F.3d at 639 (Newman, J., concurring in part, dissenting in part). The doctrine of equivalents plays an important role in this function of the patent system. *Id.* at 641; *see also Hilton Davis Chem. Co. v. Warner-Jenkinson Co.*, 62 F.3d 1512, 1533-34 (Fed. Cir. 1995) (Newman, J., concurring) ("[T]he doctrine of equivalents, on balance, serves the interest of justice and the public interest in the advancement of technology, by supporting the creativity of originators while requiring appropriators to adopt more than insubstantial technologic change."), *rev'd on other grounds*, 520 U.S. 17 (1997); Paul J. Otterstedt, *Unwrapping File Wrapper Estoppel in the Federal Circuit*, 67 St. John's L. Rev. 405, 422 (Spring 1993) (doctrine of equivalents ensures adequate patent protection for inventors, which encourages innovation, economic growth and American competitiveness). The Federal Circuit's dramatic change in its view of the law thus negatively affects

incentives for investment in research and development of new technology. Carmen Matutes, et al., *Optimal Patent Design and Diffusion of Innovations*, 27 RAND J. Econ. 60, 61-62 (Spring 1996) (strong scope of protection benefits public welfare because inventor has more flexibility to exercise his or her property rights and will more readily disclose knowledge derived from basic innovation); Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, 5 J. Econ. Perspectives 29, 31 (Winter 1991) (first innovators will have incentives to invest only where they can benefit from surplus provided by second generation products).

Moreover, inventors, faced with the prospect of obtaining a scope of protection limited to the strict, literal language of their amended claims, will have a strong incentive to rely on trade secret protection. *See Graver Tank*, 339 U.S. at 607 (noting that limiting scope of claims to their literal language would "foster concealment rather than disclosure of inventions," and thus would run counter to one of the primary purposes of the patent system). Judge Michel in his dissent stated that the Federal Circuit's "complete bar" rule would create:

> a perverse incentive for patent applicants, particularly those who are financially unable to invoke the appeals process, to simply abandon their applications. In many cases, it may be more effective to protect an invention by maintaining it as a trade secret than by accepting a patent that will publicize the invention, but provide protection only from literal infringement.

Festo, 234 F.3d at 618 (Michel, J., concurring in part, dissenting in part). Judge Michel's views are shared by others. *See, e.g.*, Simone A. Rose, *Patent "Monopolyphobia": A Means of Extinguishing the Fountainhead?*, 49 Case W. Res. L. Rev. 509, 523-24 (Spring 1999); Mark F. Grady & Jay I. Alexander, *Patent Law and Rent Dissipation*, 78 Va. L. Rev. 305, 318 (Feb. 1992). This result described by Judge Michel--inhibiting the disclosure of new technology--will significantly reduce society's gain from research and development for at least three reasons. First, knowledge derived from new technological innovations will not enter the public domain. Quick access to that knowledge facilitates research and development of follow-on improvements. *See* Wegner, *supra*, 18 Rutgers Computer & Tech. L.J. at 31. Second, the cost of maintaining a trade secret to the innovating firm may come close to or equal the public benefit derived from the innovation. *See* Grady and Alexander, *supra*, 78 Va. L. Rev. at 318. Third, resort to trade secret protection in the early stages of development of a new technology will often result in wasted resources and additional costs, thus further reducing the overall public benefit of the innovation. Competitors would waste resources, because they would likely invest research and development dollars in redundant efforts to derive the same new technology as that maintained in secrecy by the innovator. *See* Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & Econ. 265, 278 (1977).

Another goal of the doctrine of equivalents is to prevent copyists from avoiding infringement by making insubstantial changes to a patented invention through the use of after-arising technology. The Federal Circuit's "complete bar" rule nullifies this goal if the competitor or copyist is employing after-arising technology. Judge Rader commented that "this result defies logic." *Festo*, 234 F.3d at 619 (Rader,

J., concurring in part, dissenting in part). Judge Rader also correctly observed that the Federal Circuit's application of the "complete bar" rule to after-arising technology conflicts with an important principle underlying prosecution history estoppel:

> Estoppel prevents a litigant from denying an earlier admission upon which another has already relied. In the case of patent law, the admission is the applicant's surrender of claim scope to acquire the patent. . . By definition, applicants could not have surrendered something that did not even exist at the time of the claim amendment, namely after-arising technology.

Id. at 619-20 (internal citation omitted).

By removing an important check on the behavior of the competitor or copyist -- a step taken by the Federal Circuit to provide clearer notice to the public -- the Federal Circuit failed to accord adequate weight to the need to provide requisite incentives for inventors "to bear the commercial risk in developing and disclosing new technology." *Festo*, 234 F.3d at 627 (Linn, J., concurring in part, dissenting in part). Scholars' analyses of the doctrine of equivalents from both a legal and an economic perspective support this view. *See, e.g.*, Stanley M. Besen & Leo J. Raskind, *An Introduction to the Law and Economics of Intellectual Property*, 5 J. Econ. Perspectives 3, 5 and n.2 (Winter 1991) ("The legal treatment of related innovations will also influence the ability of producers to capture sufficient revenues to justify undertaking research and development. If the law permits others easily to 'innovate around' an innovation, or to produce complements to it, the incentives to create the innovation may be reduced

significantly."); Wegner, *supra*, 18 Rutgers Computer & Tech. L.J. at 31 ("Patent protection that can be easily circumvented is antithetical to building a strong research-based industrial economy.").

Finally, the increased costs of obtaining patent protection as a result of the "complete bar" rule may become prohibitively high for individual inventors and start-up companies. *Festo*, 234 F.3d at 624 (Linn, J., concurring in part, dissenting in part). Patent protection for key technology often is a major asset that high-technology start-ups have to attract investors. The success of such start-ups has been a major factor in this country's dominant positions in biotechnology, microelectronics, and information technology. The protracted prosecution, increased costs, and uncertainty surrounding amendments to claims as a result of the decision below likely will discourage innovation and investment in research and development by these entities. *See id.*

CONCLUSION

The judgment of the Court of Appeals should be reversed.

Respectfully submitted,

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